

IN THE CLAIMS:

The follow claim listing replaces all previous claim listings in the application.

1 Claims 1-4. (cancelled)

1 Claim 5. (currently amended) An addressing information
2 generation system embodied in computer readable medium comprising:
3 a difference computation unit for computing a difference between
4 structured documents; and

5 an addressing information generation unit for generating
6 addressing information from addressing information that addresses a
7 part of a particular structured document based on information on the
8 difference computed by the difference computation unit, the generated
9 addressing information addressing a corresponding part of the other
10 structured document; and

11 wherein the addressing information is written in XPath and
12 addressing information generation unit generates an XPath for the other
13 structured document by regenerating LocationSteps forming an XPath for
14 the particular structured document based on the difference between the
15 structured documents and on the XPath for the particular structured
16 document.

1 Claim 6. (original) An addressing information generation system
2 according to claim 5, further comprising a document analysis unit for
3 analyzing structures of the structured documents and converting the
4 structures into tree-structured data items,

5 wherein the difference computation unit computes the difference
6 by comparing the tree-structured data items corresponding to the
7 structured documents converted by the document analysis unit.

1 Claim 7. (original) An addressing information generation system
2 according to claim 6, wherein the difference computation unit computes
3 the difference between the tree-structured data items to track a
4 component of the tree-structured data items that is moved in operations
5 for transforming one of the tree-structured data items into the other
6 tree-structured data item.

1 Claims 8 and 9. (cancelled)

1 Claim 10. (currently amended) A program embodied in computer
2 readable medium for controlling a computer so that the computer
3 performs data processing for addressing at least one predetermined
4 element in a structured document, the program causing the computer to
5 perform:

6 first processing of, when the structured document having the
7 element addressed by predetermined addressing information is modified,
8 inputting the structured document to analyze the modification and
9 storing an analysis result in a memory; and

10 second processing of reading the analysis result from the memory
11 and updating the addressing information according to the analyzed
12 modification so that the addressing information addresses at least one
13 corresponding element in the modified structured document; and

14 wherein the first processing provided by the program comprises
15 the processing of:

16 converting an unmodified version and a modified version of
17 the structured document into tree-structured data items; and

18 computing a difference between the tree-structured data
19 items to track a component of the tree-structured data items that is
20 moved in operations required for transformation between the tree-
21 structured data items transformed from one to the other according to
22 modification of the structured document; and

23 wherein in the second processing provided by the program, the
24 program causes the computer to update the addressing information based
25 on the difference between the tree-structured data items.

1 Claims 11 and 12. (cancelled)

1 Claim 13. (currently amended) A program according to claim 10,
2 embodied in computer readable medium for controlling a computer so that
3 the computer performs data processing for addressing at least one
4 predetermined element in a structured document, the program causing the
5 computer to perform:

6 first processing of, when the structured document having the
7 element addressed by predetermined addressing information is modified,
8 inputting the structured document to analyze the modification and
9 storing an analysis result in a memory; and

10 second processing of reading the analysis result from the memory
11 and updating the addressing information according to the analyzed
12 modification so that the addressing information addresses at least one
13 corresponding element in the modified structured document; and

14 wherein in the second processing provided by the program, the
15 program causes the computer to update an XPath describing the
16 addressing information by regenerating LocationSteps forming the XPath
17 based on the difference between the unmodified version and the modified
18 version of the structured document.

1 Claim 14. (currently amended) A program embodied in computer
2 readable medium for controlling a computer to compute a difference
3 between at least two tree-structured data items, the program causing
4 the computer to perform:

5 first processing of reading at least two tree-structured data
6 items to be processed from memory to compare the at least two tree-
7 structured data items, creating an operation sequence, in which each
8 operation for transforming one of the tree-structured data items into
9 the other tree-structured data item is expressed as a combination of
10 predetermined operations, on a component of a tree-structure, and
11 storing the list in memory; and

12 second processing of reading the operation sequences from the
13 memory and changing operations in the operation sequence that are
14 interpreted as a movement of a component into an operation of moving
15 the component; and

16 wherein in the second processing provided by the program, the
17 program causes the computer to add an operation of moving a component
18 of the tree-structured data items to the operation sequences in place
19 of a pair of operations of removing and inserting the component in the
20 operation sequences.

1 Claim 15. (cancelled)

1 Claim 16. (currently amended) A program ~~according to claim 14,~~
2 embodied in computer readable medium for controlling a computer to
3 compute a difference between at least two tree-structured data items,
4 the program causing the computer to perform:

5 first processing of reading at least two tree-structured data

6 items to be processed from memory to compare the at least two tree-
7 structured data items, creating an operation sequence, in which each
8 operation for transforming one of the tree-structured data items into
9 the other tree-structured data item is expressed as a combination of
10 predetermined operations, on a component of a tree-structure, and
11 storing the list in memory; and

12 second processing of reading the operation sequences from the
13 memory and changing operations in the operation sequence that are
14 interpreted as a movement of a component into an operation of moving
15 the component; and

16 wherein in the second processing provided by the program, the
17 program causes the computer to replace, based on a predetermined rule,
18 an operation of modifying a component of the tree-structured data items
19 in the operation sequences with a different operation that involves
20 moving the component.

1 Claims 17-21. (cancelled)

1 Claim 22. (original) A computer program product comprising a
2 computer usable medium having computer readable program code means
3 embodied therein for causing addressing information generation, the
4 computer readable program code means in said computer program product
5 comprising computer readable program code means for causing a computer
6 to effect the functions of claim 5.

1 Claim 23. (cancelled)

1 Claim 24. (new) A program according to claim 13,
2 wherein the first processing provided by the program comprises
3 the processing of:

4 converting an unmodified version and a modified version of the
5 structured document into tree-structured data items; and

6 computing a difference between the tree-structured data items,
7 and

8 wherein in the second processing provided by the program, the
9 program causes the computer to update the addressing information based
10 on the difference between the tree-structured data items.

1 Claim 25. (new) A program according to claim 24, wherein in the
2 processing of computing the difference provided by the program, the
3 program causes the computer to compute the difference between the tree-
4 structured data items to track a component of the tree-structured data
5 items that is moved in operations required for transformation between
6 the tree-structured data items transformed from one to the other
7 according to modification of the structured document.

1 Claim 26. (new) A program according to claim 16, wherein in the
2 second processing provided by the program, the program causes the
3 computer to add an operation of moving a component of the tree-
4 structured data items to the operation sequences in place of a pair of
5 operations of removing and inserting the component in the operation
6 sequences.